

5 August 2015



Our Ref: J27035 / J31314
Your Ref: Email received 02 August 2011

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Cape Town

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Dear Mr. van der Velden

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RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)

My comments are still the same as before.

Comment 1:

The proposed nuclear reactors are proposed to be at hopelessly the wrong places. The electricity is needed where the industrial growth is. That is in the Durban, Richards bay area. The coal in that area is slowly running out because it is exported to China and Europe instead of being used for our own industries and by the time that happens, it will be the time that the proposed nuclear reactors come on line – many, many miles from where it is needed, necessitating long lines and wastage of electricity due to resistance in the cables.

Look where the industrial growth is and where there will be more of in the future. Not only are the aluminium smelters there, there is the Mosel (sic)¹ smelter across the border as well. They need massive amounts of electricity. In fact, half the price of an aluminium pot is the electricity to smelt it.

Response 1:

Your comments are noted. As previously stated the current application for Environmental Authorisation does not preclude the application for Environmental Authorisation for additional nuclear facilities in other areas experiencing high energy demand. The proposed nuclear power station at Thyspunt is located close to Port Elizabeth, which is recognised as a growth node where additional electricity is required. As indicated in the Nuclear-1 EIA presentations at public meeting, this development node and the Western Cape are the two areas where Eskom has identified the need for additional generation capacity. In this respect, see also Response 3.

It is important to note that the power that will be generated by the Nuclear-1 power station will be fed into the national electricity grid in order to strengthen its capacity and also alleviate pressure currently experienced due to the high electricity demand. Furthermore, several announcements by the South African government in the 1st quarter of 2012 have indicated its commitment to the development of additional nuclear electricity generation capacity besides Nuclear-1.

¹ Presumably this is a reference to Mozal in Mozambique

Comment 2:

The proposed sites are smack in the middle of not one, but two environmental hotspots - one on land and one in the sea. The terrestrial one is in a world natural heritage site to boot. The marine one is a hotspot of marine habitats and species as well. The current assessment and proposed mitigating measures are, in my opinion, inadequate. The Algulhas (sic) Bank and fisheries should be much better researched. With the long proposed power lines, it will take only a decade or two, to electrocute the entire Overberg blue crane population, as that is exactly the height that these birds fly.

Response 2:

Your comments are noted. The Thyspunt site is not a World Heritage Site. It was indicated in the Heritage Impact Assessment in the revised Draft EIR (Appendix E20) that Thyspunt has the potential to qualify as a World Heritage Site. However, there are currently no plans to nominate the site for World Heritage status. Such declaration would be subject to nomination by the Department of Environmental Affairs and acceptance by the United Nations Educational Scientific and Cultural Organisation (UNESCO) according to strict criteria. No such nomination has been lodged by the South African government.

The sensitivities of each site are well documented in the Environmental Impact Assessment and its associated specialist's studies. These sensitivities together with technical requirements, transmission integration factors as well as current demand were all taken into account when identifying potential sites for a nuclear power station. However, the impact of the proposed power lines does not form part of this application for Environmental Assessment. The proposed power lines are being addressed in separate EIA for Thyspunt.

Comment 3:

The whole mindset that the nuclear reactors should be here in the southern part of the country, is still the old mindset of the P.W. Botha era, when all the "sensitive" installations, should be as far away as the swart gevaar from the north. Like the missile engine factory in three Kogelberg areas, the missile guidance systems research centres in Hermanus and at Houwtec in Grabouw, the missile fuel manufacturing and research at Somchem in Somerset west and missile test range at Bredasdorp, to name the well known ones. The new planners just did not think any further and just followed up on what P.W. started

Response 3:

Eskom's focus is to provide power as close as possible to the areas where there is the greatest need to power. The stretch of coastline that was included in the NSIP includes the two most important growth areas where the greatest increase in electricity demand occurs and is due to continue for the foreseeable future, namely Port Elizabeth and the Cape Town metropole. In this regard, it is important to note that one of the reasons why the two Northern Cape sites were no longer regarded as reasonable and feasible for the EIA phase is the long distance to the Western Cape load center and others that the transmission lines would have to traverse.

Comment 4:

Countries like Germany decided to phase out nuclear reactors all together. Do they perhaps know something that we don't?

Response 4:

The BBC (<http://www.bbc.co.uk/news/world-europe-13592208>) reports that Germany's decision to close down its nuclear power stations will most probably lead to an increase in the import of nuclear energy from France. Phasing out nuclear power will also result in increased dependence on fossil fuels, which result in proportionately larger releases of greenhouse gases into the atmosphere than nuclear power, which has a greenhouse gas footprint similar to some renewable technologies (see Section 4.2.2 of the Revised Draft EIR). There is a further risk that Germany will not manage to quickly halt its dependency on fossil fuels, especially coal-based energy, which creates unintended negative environmental impacts of its own.

Comment 6:

The nuclear reactor that is being built in Finland is running in massive problems and cost overruns, because the Finns are not going to allow anything unsafe on their soil. They found, too late, that the design was inherently unsafe. If they could invent Nokia cell phones, they cannot be so dumb.

Response 6:

We agree that there are cost overruns at the plants mentioned above. However, it must be borne in mind that the Finland site was the first site where the new EPR unit was constructed. The French site was the second and a considerable number of lessons learnt in Finland were implemented at the French site (Flamenville), hence the much reduced delay times. The Chinese plants used these lessons and are on time and within cost. Eskom never intended to build a first of a kind plant type, which will reduce the risk of overruns and the subsequent excessive cost mentioned above.

Comment 7:

The geology assessment is mostly based on old research done with old technology. It is certainly not adequate for future planning. It should be re-evaluated. If the World did not sit up and take notice of Fukushima, then at least the South Africans should.

Response 7:

Your comment is noted. The Japanese disaster is indeed a stark reminder of the unpredictability of the natural environment. However, it is well known that South Africa is located on a vastly more stable tectonic environment than that of Japan, which is situated close to a major subduction zone within the Pacific Ocean. The descriptions and facts reported in the Geological Hazard and Seismic Risk Assessment stem from published data and work undertaken by the Council for Geoscience and others. In terms of the identification of faults and seismic risk, the information represents the current knowledge and understanding based on a regional picture. New evidence of neotectonic² movements

² The study of tectonic movements in current or recent geological time

may be discovered in the more detailed investigations that still have to be undertaken for the design of the power station. However, based on current knowledge, the site has been found to have no seismic disqualifiers. Information obtained during more detailed studies will be used to refine the design of the power station, but will not change the siting decision.

Furthermore, the safety of the KNPS has recently been checked following the events at the Fukushima nuclear power plant. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events from Fukushima.

Comment 8:

If the politicians think the building of the reactors are going to bring jobs due to construction, think again. The Medupi coal fired station is built, not by South Africans, but by Chinese. Virtually no jobs were created for South Africans. Besides, nuclear power plants are built in overseas countries in a modular design and just put together where they want them, like a Lego set. That point was incidentally, also in your own report.

Response 8:

Your comment is noted. However, please note that employment opportunities will not only be created in the construction phase but also the operational phase of the nuclear power station. It is projected that 7700 jobs will be available during construction, of which 25% need to be employed locally. The contractor must comply with this requirement and the required training stipulated by Eskom. It is widely reported in the media of the Medupi Project spinoffs in terms of creating jobs and developing skills and local supplier industries, as well as boosting the economies of the local community.

Yours faithfully



For GIBB (Pty) Ltd
Nuclear-1 EIA Team